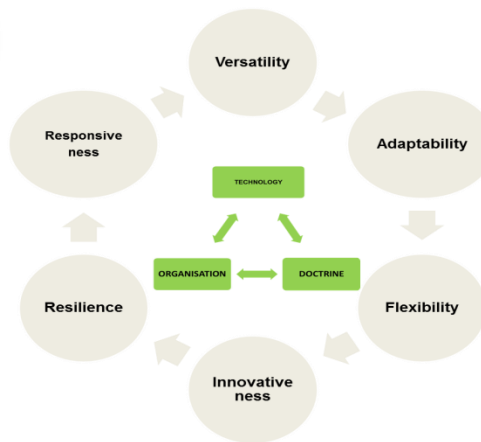




# *Agility - The Danish Way*



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# ***‘A’ PLAN...***

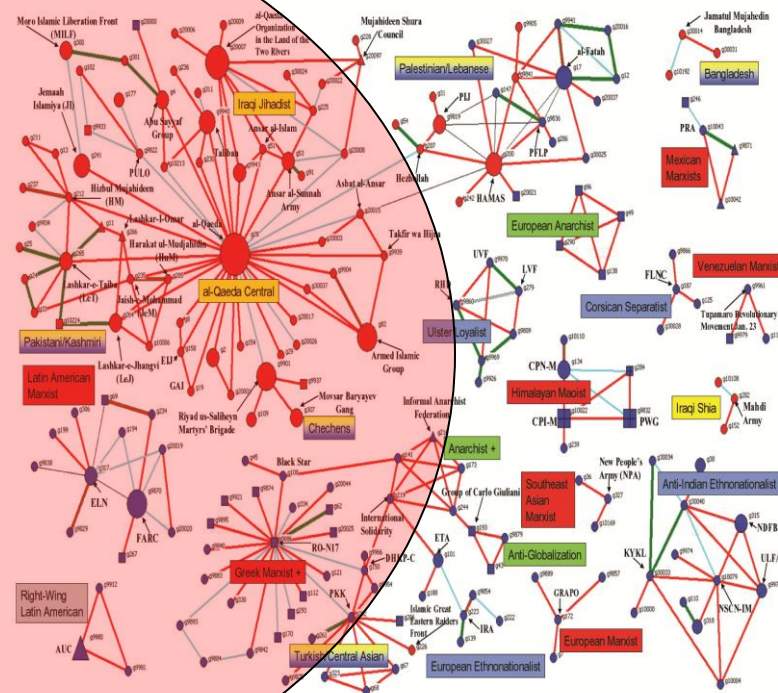
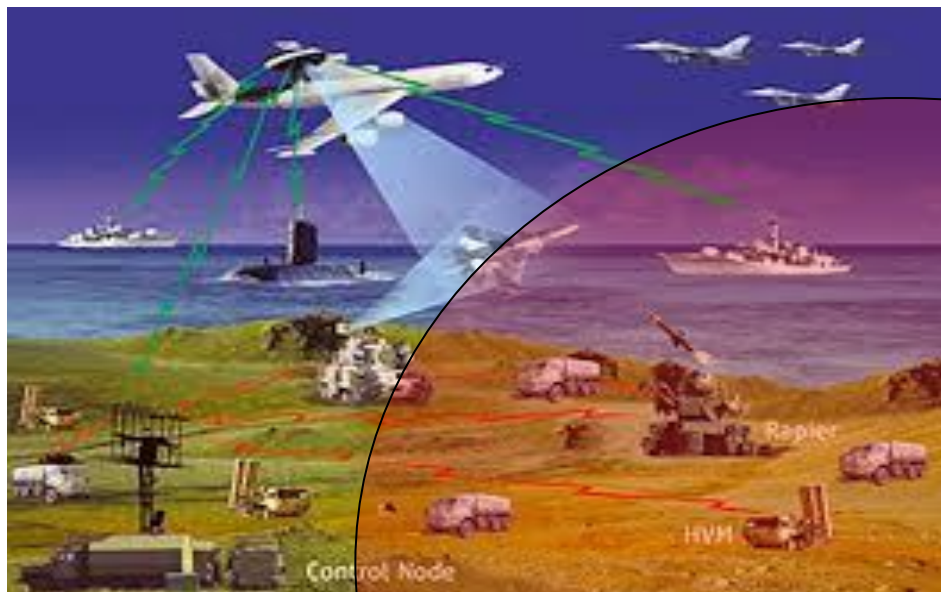


- Theory
- Research Completed
- Operationalizing Agility Research
- Future Agility Research



**Agility is the capability  
to successfully effect, cope with and/or exploit  
changes in circumstances.**

Why do we think we need agility?

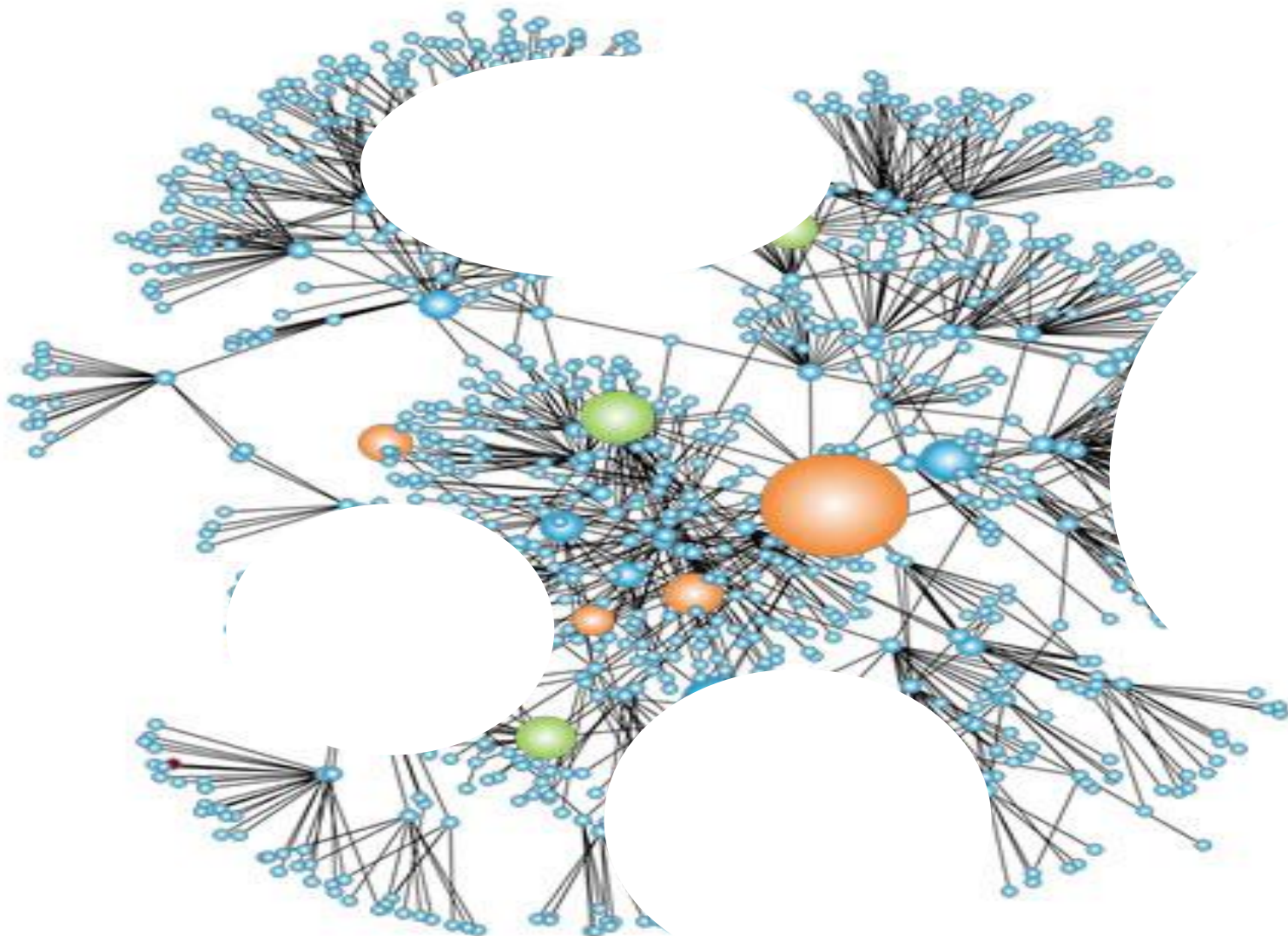


## ..See John Arquilla's Netwars...





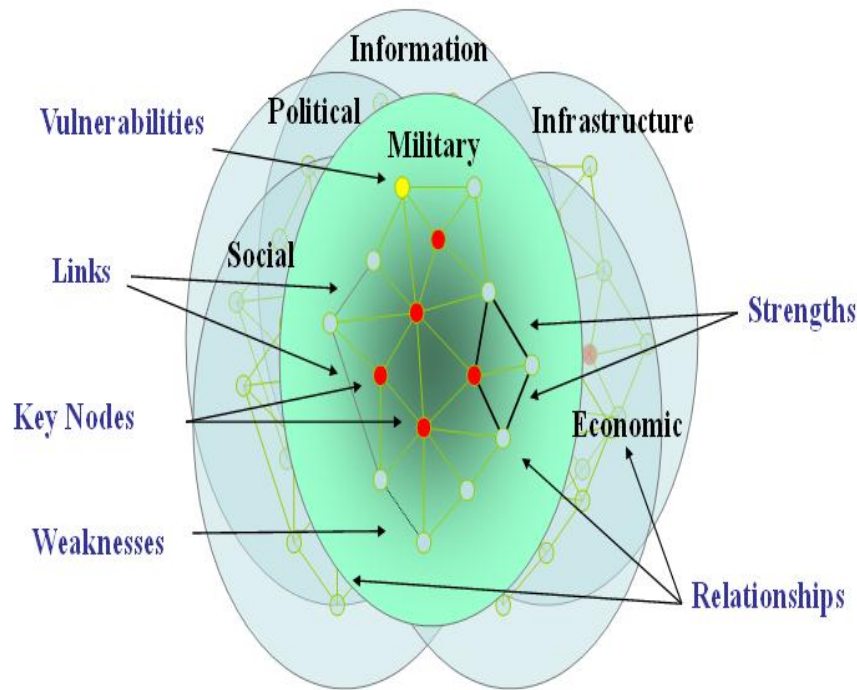
# ...complex adaptive battlespaces



**IN THE INFORMATION AGE - ADVERSARIES LEARN FASTER AND ADAPT FASTER**



# Complexity in the Battlespace



1. Information increases  
(Go from 1 to 6  
dimensions)

2. Variety increases ( $M + P, E, S, I, I$ )

3. Interconnections  
increases

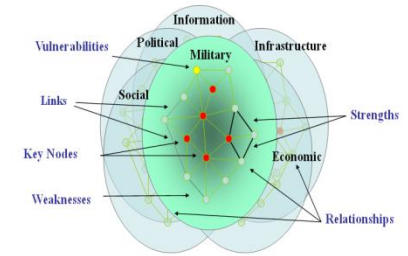
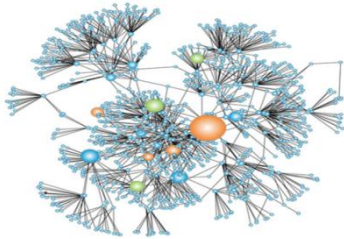
Go from 0- 720 ( $P \times M \times E \times S \times I \times I$ )

(Assumption: That types of interconnections  
are known.)

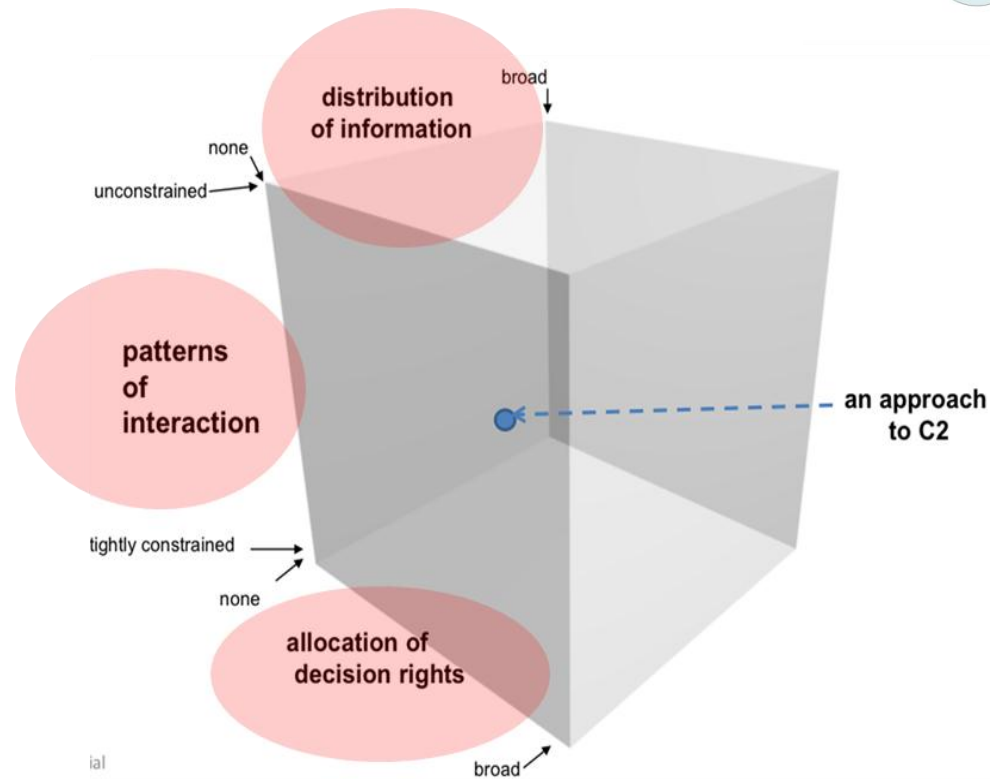
4. Types of  
interconnections are not  
known and have to be  
discover or invented.



# 21st Century battlespaces demand agility...



**REQUIRES A CONSCIOUS  
APPROACH TO AGILITY**

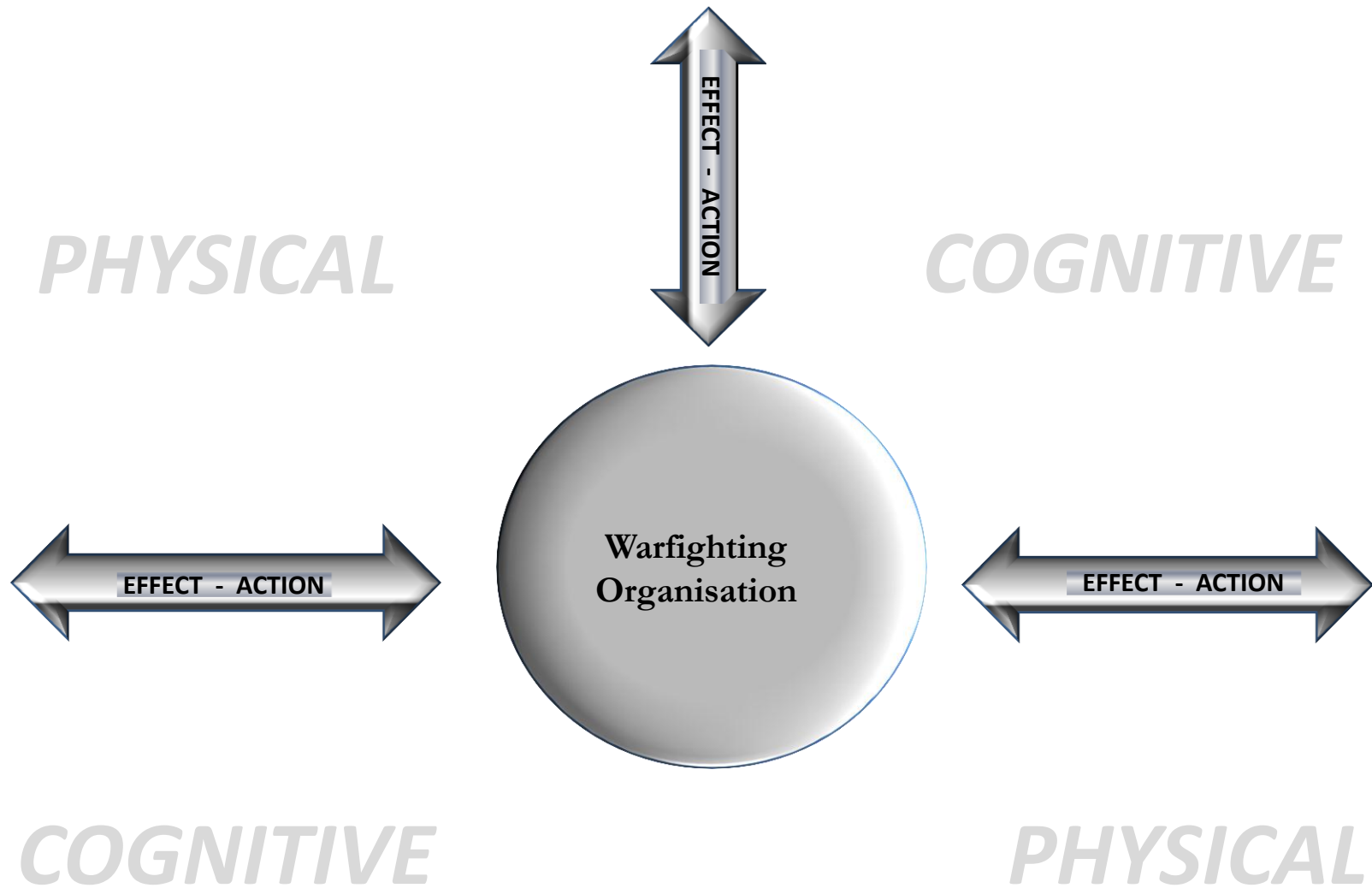


**Yours ...and theirs...**





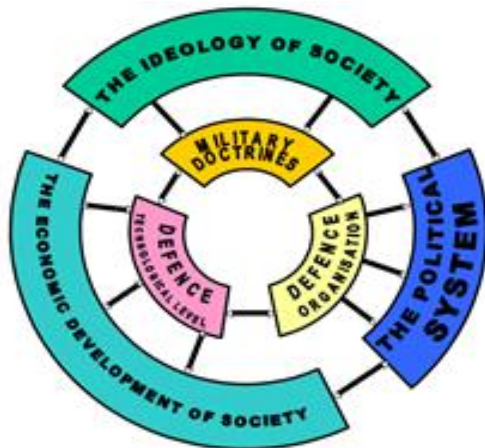
# The Battlespace



Hmm... SOFCOM Motto : "He who manages intersubjectivity best – wins "...



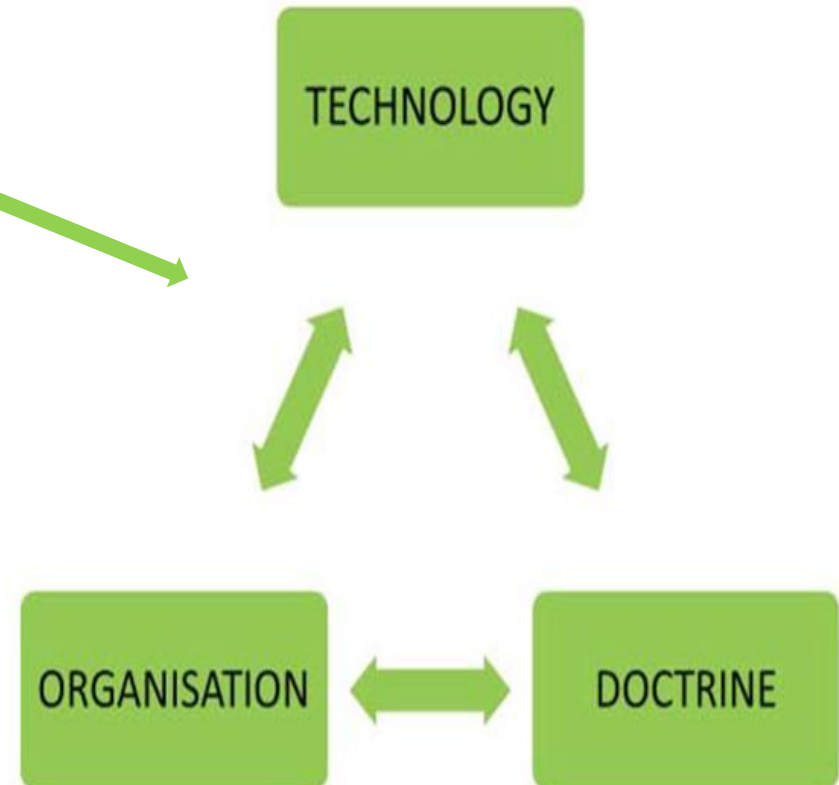
# THE DANISH WARFIGHTING MODEL



Figur x – Krigsførelsen kredsløb

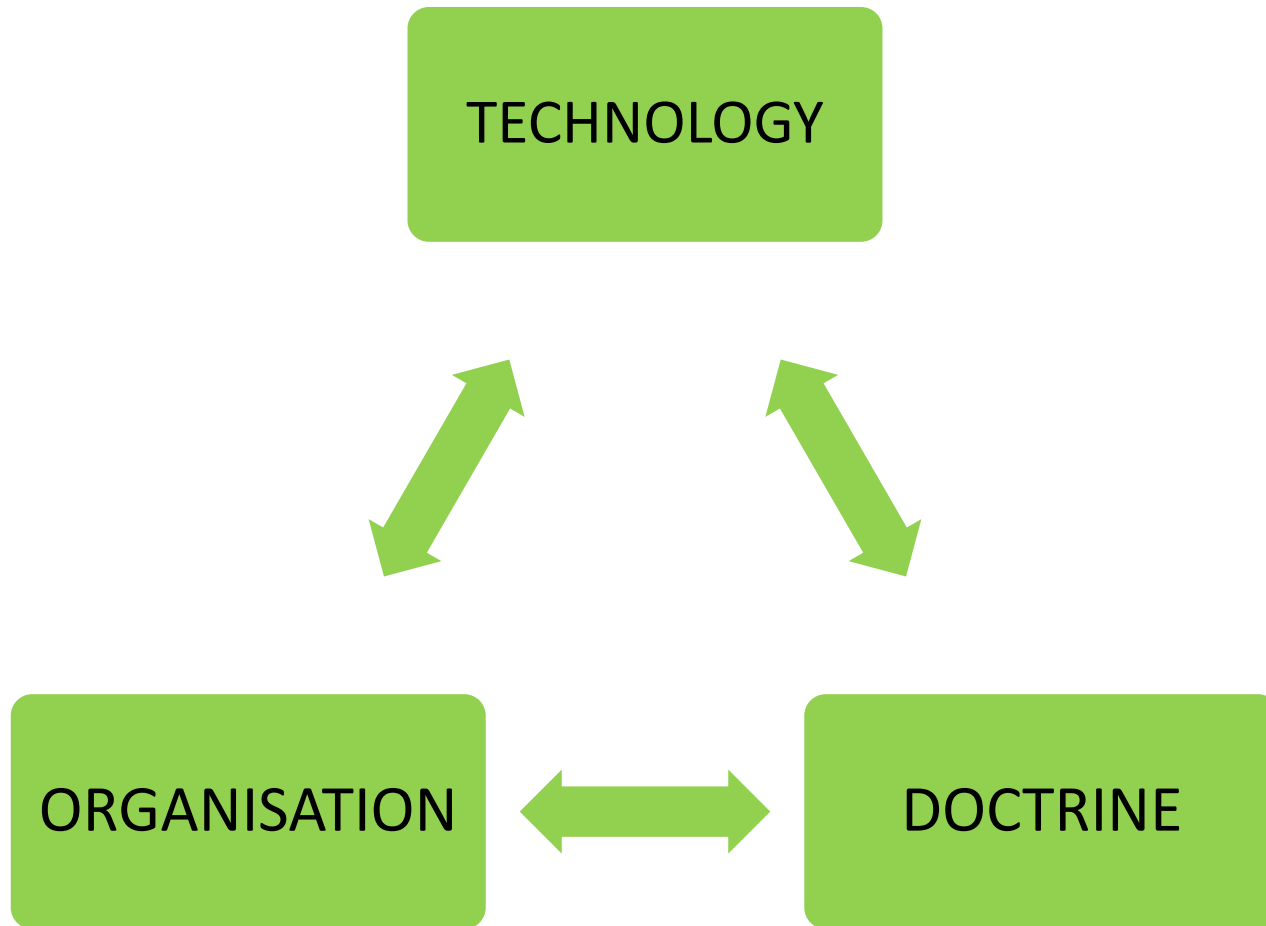
The model was developed in the 1960s brought back into action in 2001 due to activist foreign policy.

- Yugoslavia
- Kosovo
- Iraq
- Afghanistan
- Horn of Africa
- Libya
- Mali
- Syria





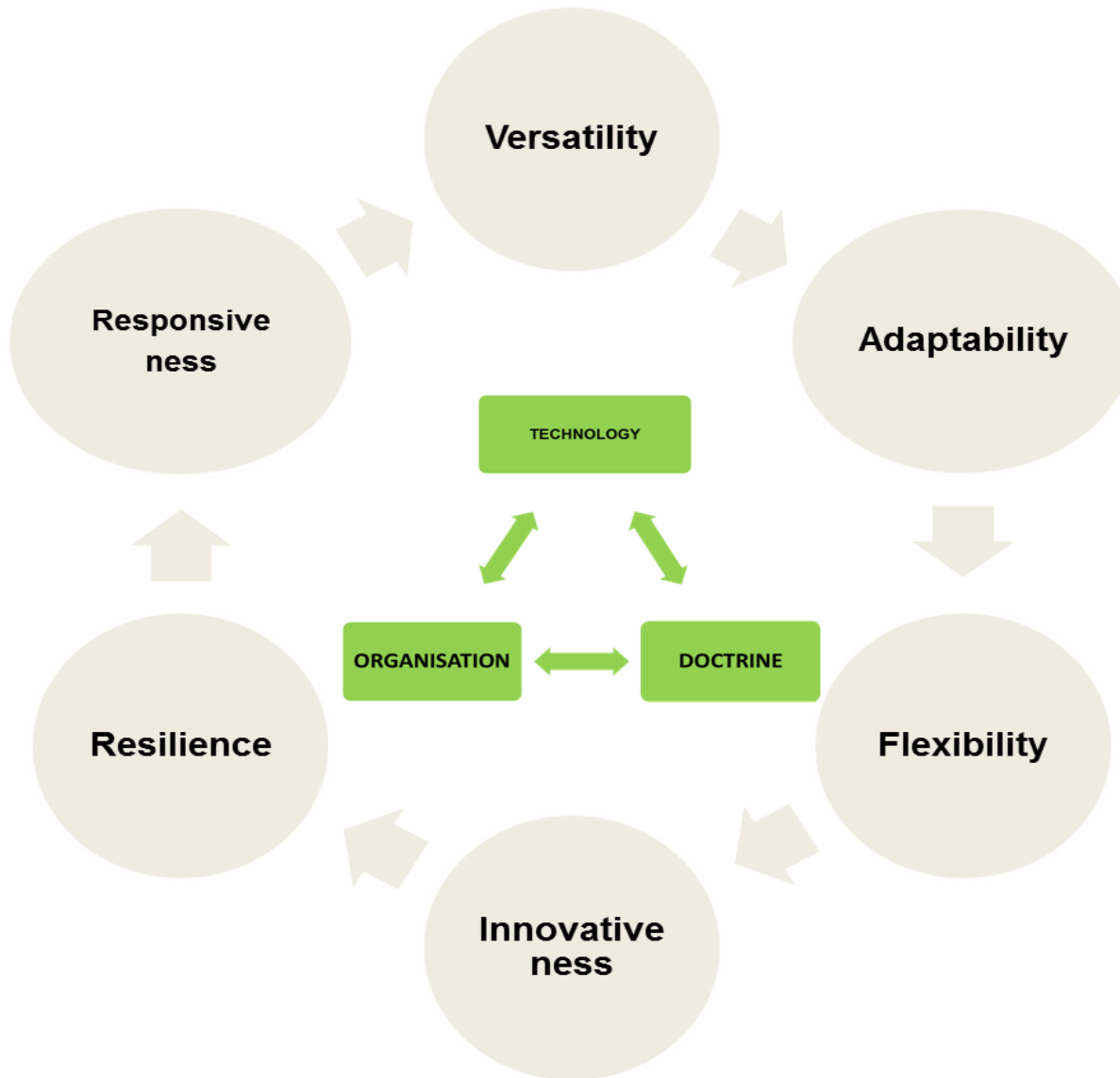
# THE DANISH WARFIGHTING MODEL (Danish "krigsføringskredsløb") Optimality & The Warfighting Organisation



**Optimality achieved through a harmonization of all 3 elements**



# RDDC AGILITY ASSESSMENT FRAMEWORK

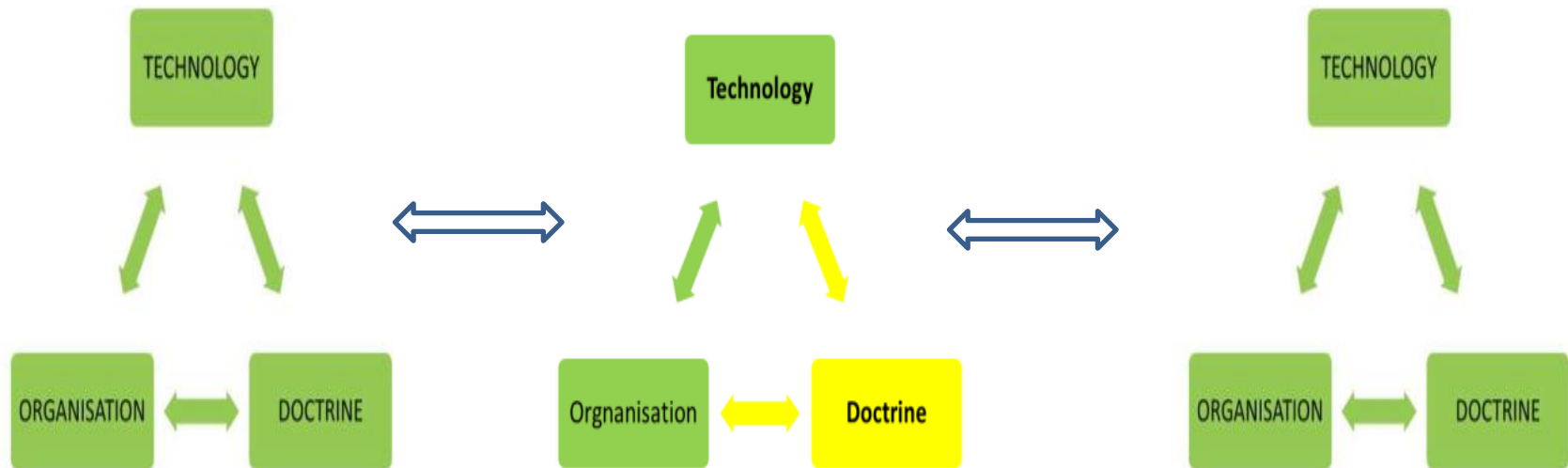




# RDDC BATTLESPACE AGILITY ASSESSMENT FRAMEWORK



**EX. How did doctrine affect battlespace agility for TF 444 during Operation XYZ?**



**Generate MoPs as defined by SAS 050 – ex. *Decision correctness ; shared awareness; action accuracy; action appropriateness; ect...***





# RDDC:



## MEASUREMENTS OF INTELLIGENCE ANALYTICAL AGILITY IN THE BATTLESPACE

INDICATOR	DEFINITION	More Agile when ...
<b>Intelligence Timeliness</b>	Extent to which currency of information is suitable to its use.	<b>HIGH</b>
<b>Intelligence Currency</b>	Difference between the current point in time and the time the intelligence was made available	<b>LOW</b>
<b>Intelligence Correctness</b>	Extent to which intelligence is consistent with ground truth.	<b>HIGH</b>
<b>Intelligence Accuracy</b>	Degree to which intelligence quality matches what is needed.	<b>HIGH</b>
<b>Intelligence Precision</b>	Level of measurement detail in intelligence item.	<b>HIGH</b>
<b>Intelligence Relevance</b>	Extent to which intelligence quality is relevant to the task at hand	<b>HIGH</b>
<b>Intelligence Completeness</b>	Extent to which intelligence relevant to ground truth is collected.	<b>HIGH</b>

**(NATO SAS-050 Definitions)**



# RDDC Agility Research

Dept. of Joint Operations

(WARFIGHTING CONTEXT ONLY)

## BATTLESPACE AGILITY

**The speed at which knowledge is turned into the appropriate actions for desired effects in the battlespace.**

**(speed & precision)**

### FOCUS SQUARELY ON INTELLIGENCE

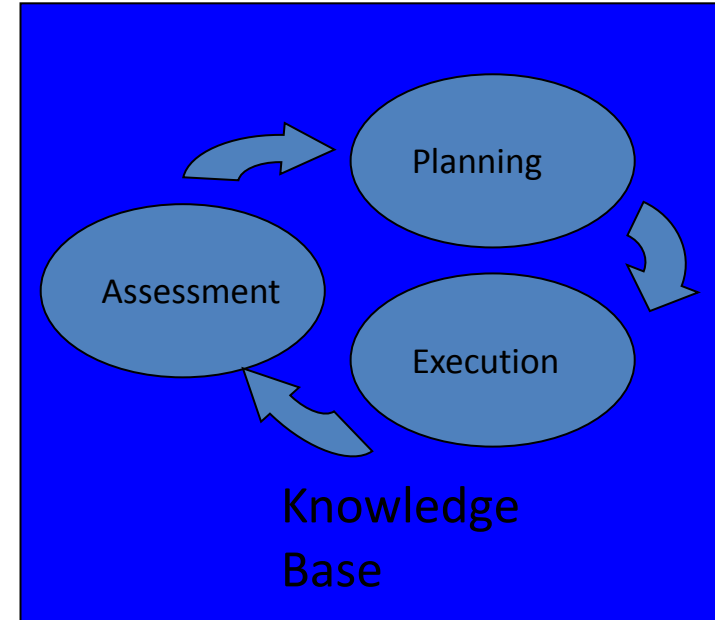
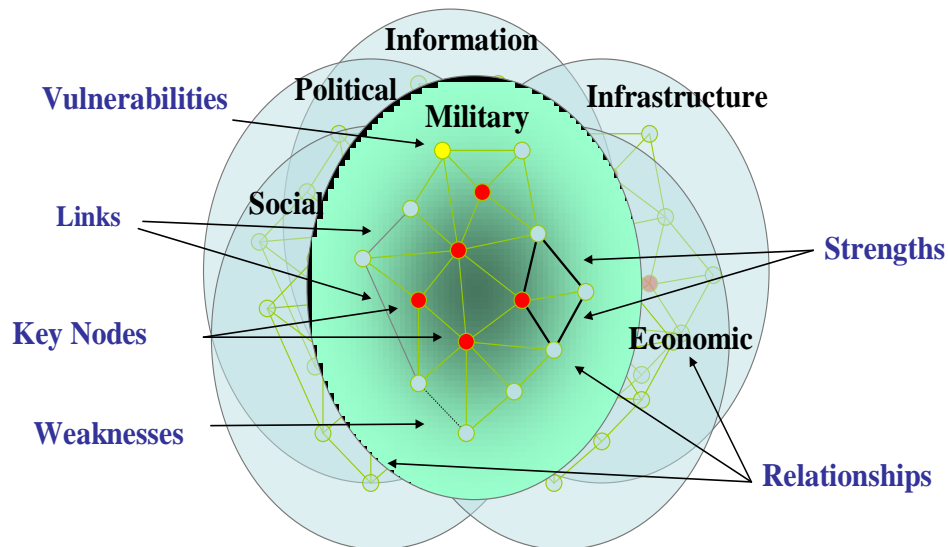
- **Axiom 1: Agility is relative (not absolute) to the situation/adversary.**
- **Axiom 2: Understanding the situation/adversary is a prerequisite for being agile.**



# Scope of Agility Investigation Restricted to Existing Battlespace Operations Doctrine



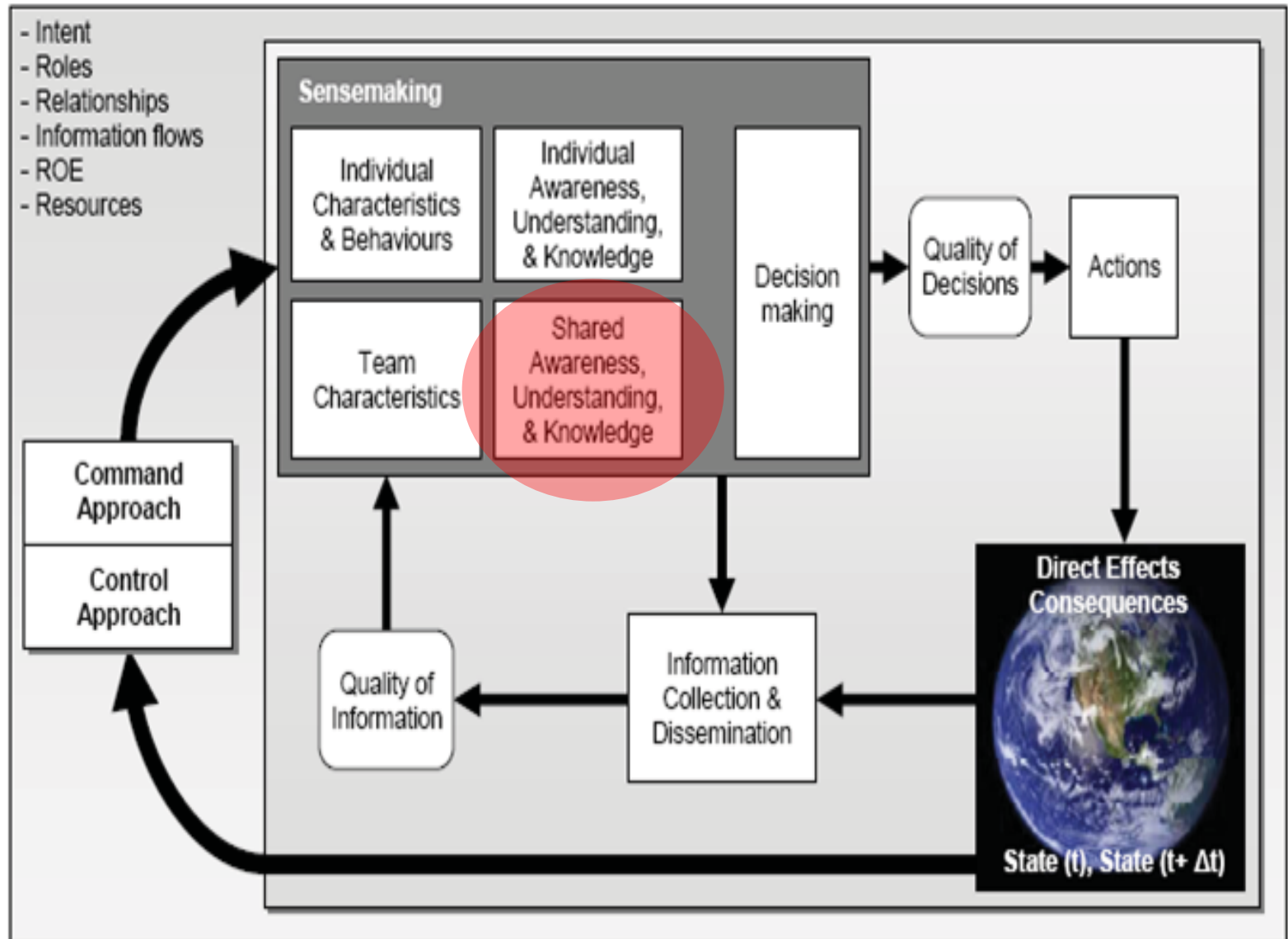
**EBT**



**PMESII**

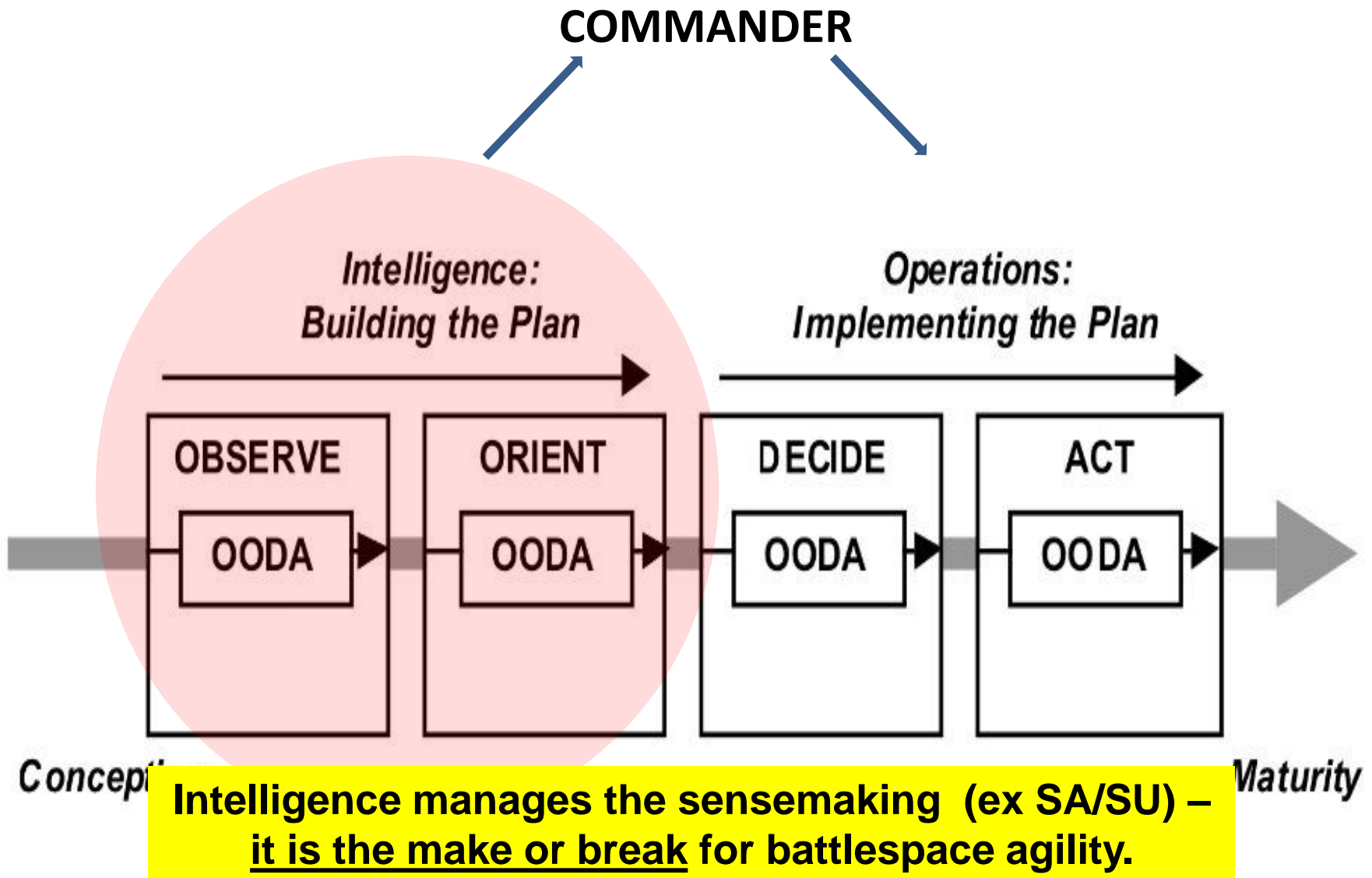


- Intent
- Roles
- Relationships
- Information flows
- ROE
- Resources





# C2 & Warfighting





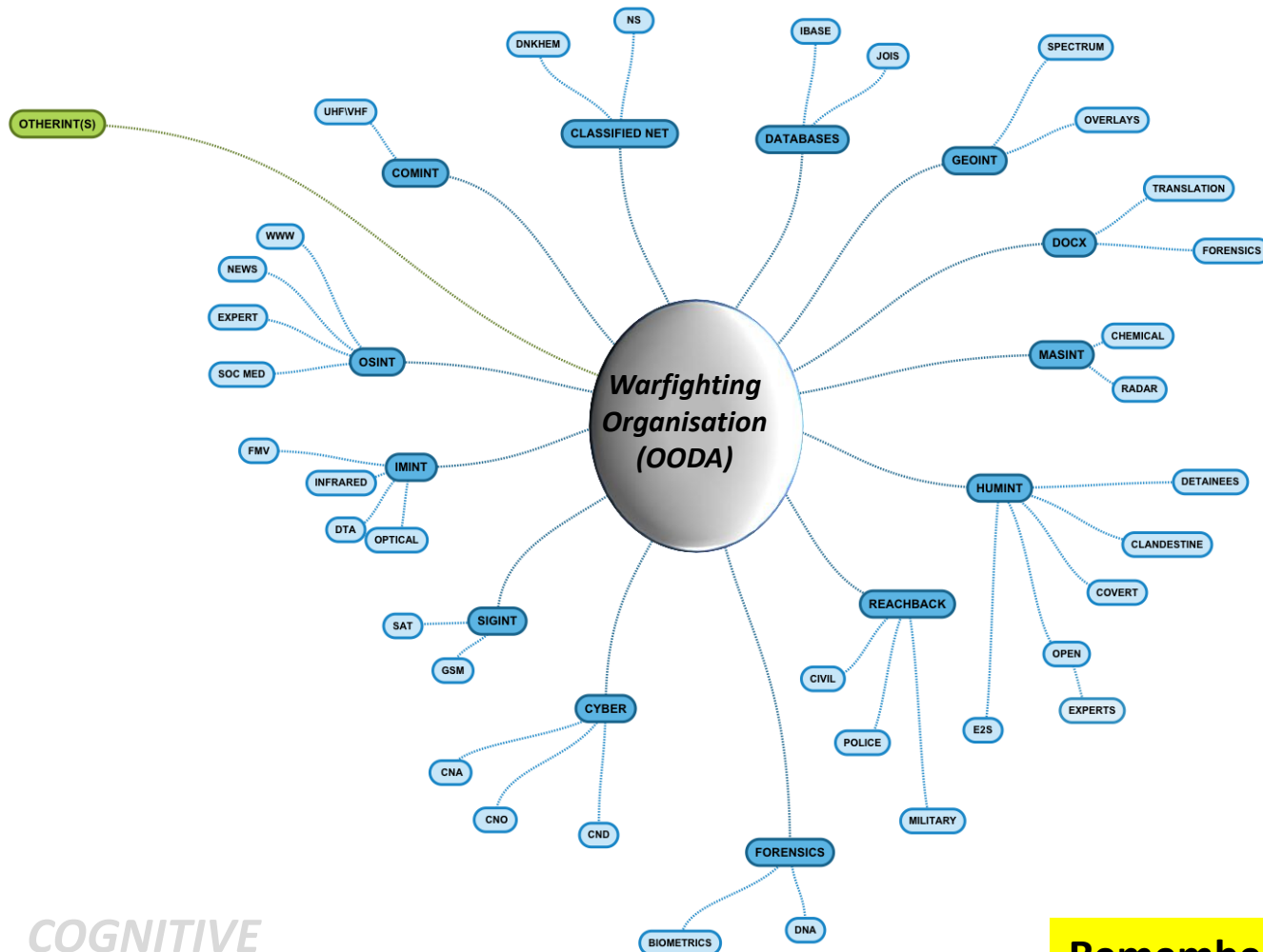


# How we 'observe' and 'orient' in the battlespace is the focus of our research.



PHYSICAL

COGNITIVE



COGNITIVE

**Remember we're not alone ....**



# COMPLETED RESEARCH PROJECTS

- 1- PROJECT AL-NUR - PMESII**
- 2- PROJECT KITAE I – C2/Helmand**
- 3- PROJECT KITAE II – SNA Helmand**
- 4- PROJECT KITAE III- HTM Helmand**
- 5- PROJECT CROWS NEST – TNM**



# Project AL- NUR

## No PMESII training

- Establish presence in Mogadishu and expand with main effort in Southern Somalia.
- Target extremist and encourage negotiation with all other parties.
- Humanitarian relief and CIMIC coordinated with targeting.
- When SASE is established in Southern Somalia - expand success and SASE northwards.
- Deliberate approach to DDR-process.

CIMIC – Civil-Military Cooperation

SASE – Safe and Secure Environment

DDR – Demobilise, Disorganise, Reintegrate



## PMESII trained

- MD1- Establish presence in Mogadishu and expand with main effort in Southern Somalia.
- MD2- Establish small military presence in Somaliland.
- P/SD1-ID Clan Structure Key Leaders in Somaliland.
- ED1- economic incentives to key leaders
- INFOD-Somaliland
- Southern Somalia - expand success and SASE northwards.

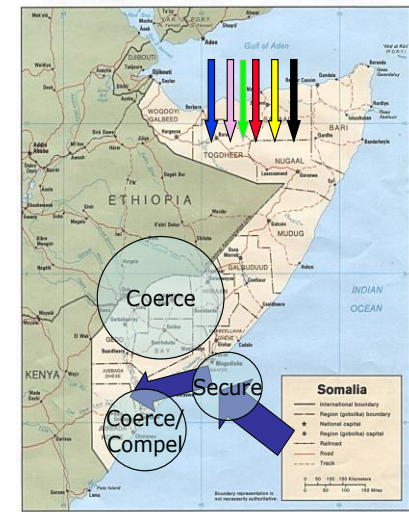
MD 1,2 – Military Dimension 1,2

P/SD1- ID- Political/Social Dimension 1 – Identification

ED1 – Economic Dimension 1

INFOD – Information Dimension

SASE – Safe and Secure Environment

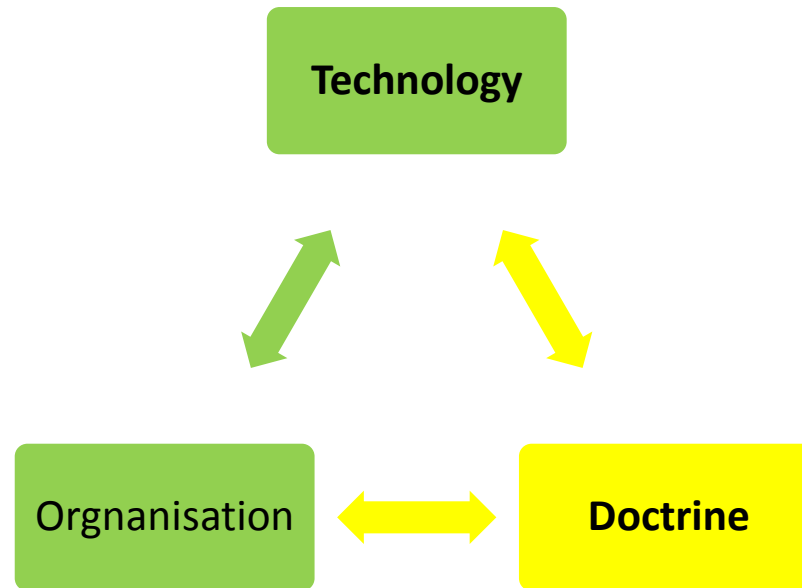


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**Commander decided on best operational plan**



# Project AL-NUR Summary



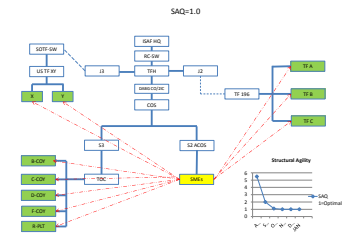
**RESULT:** SOSA provides more accurate SA/SU and therefore promotes a more flexible and resilient plan, increasing agility. Need to develop HTM capacity



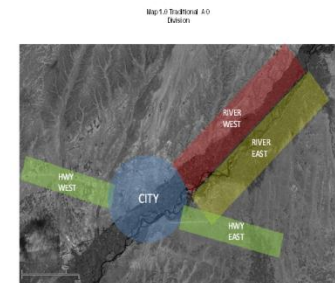
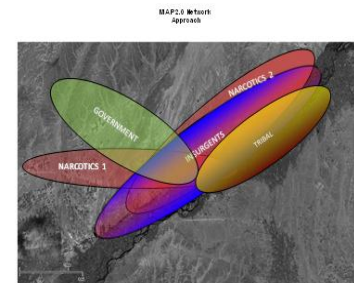
# PROJECT KITAE I, II, II



**KITAE I:** Battlespace agility in Helmand:  
Network vs. hierarchy C2



**KITAE II:** Battlespace Intelligence: Social  
network vs. traditional time and space analysis  
in Helmand



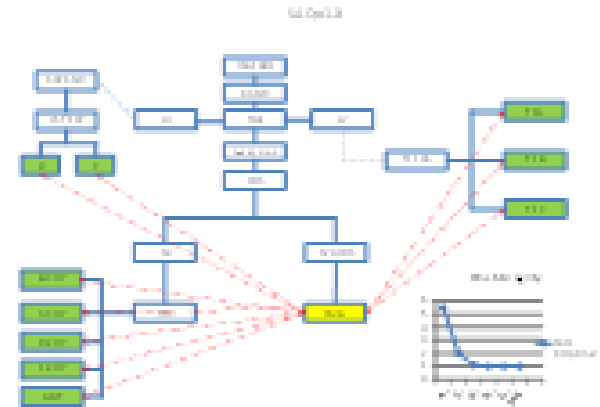
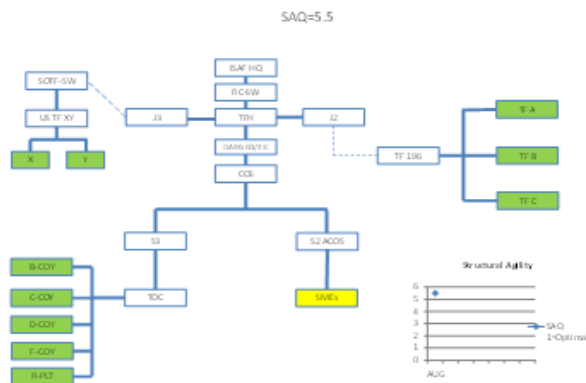
**KITAE III:** Unit construction for effect in a  
complex battlespace







# Project KITAE I Summary



Technology



Organisation



Doctrine

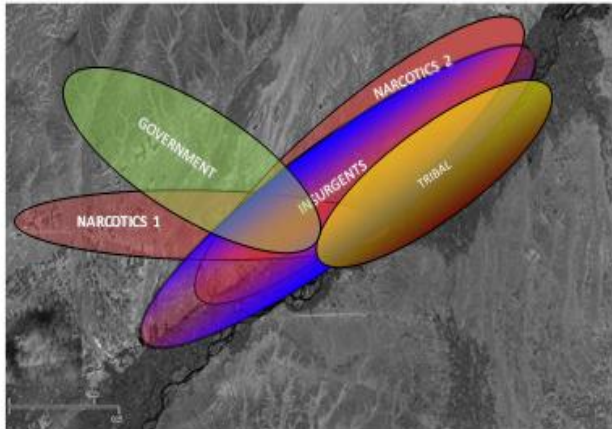
**RESULT:** The situation called for a greater allocation of decision rights in order to achieve a greater agility than our adversary.



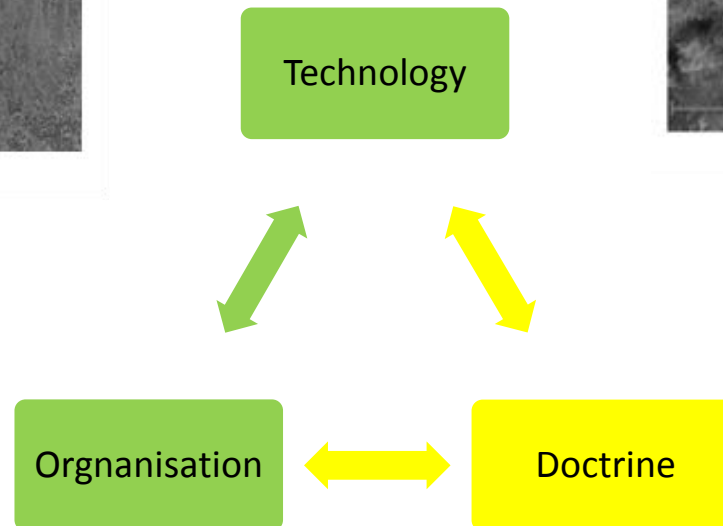
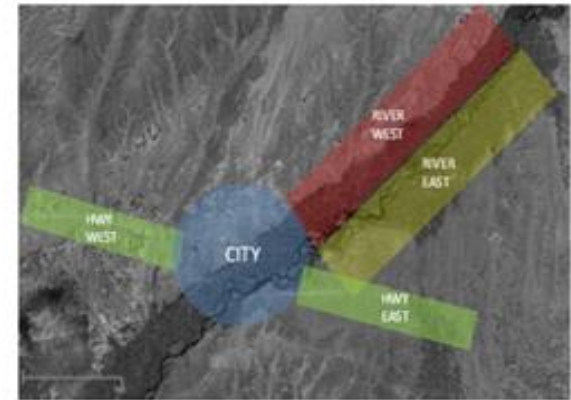
# Project KITAE II Summary



MAP2.0 Network  
Approach



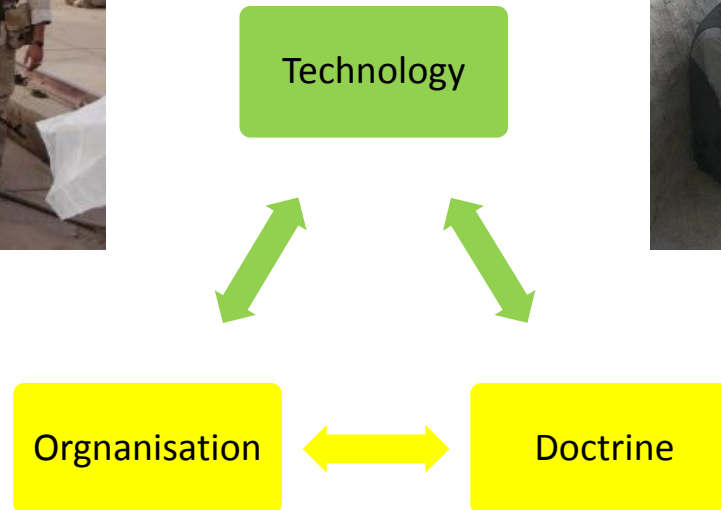
Map 1.0 Traditional 4.0  
Division



**RESULT:** Time and Space IPB doctrine does not produce ground truth and reduces information accuracy, and therefore reduces agility.



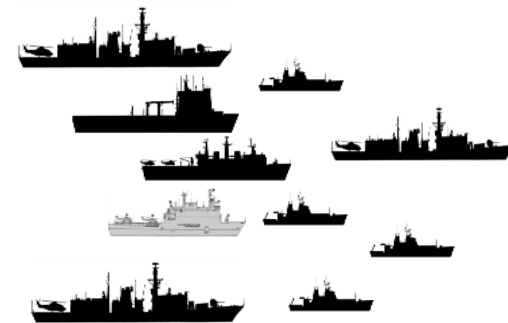
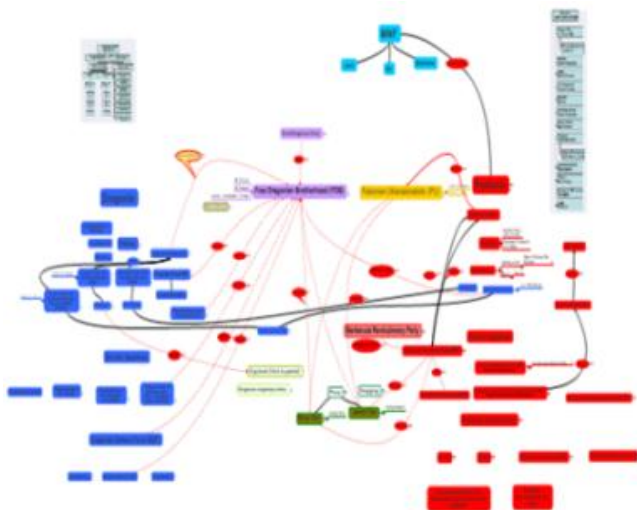
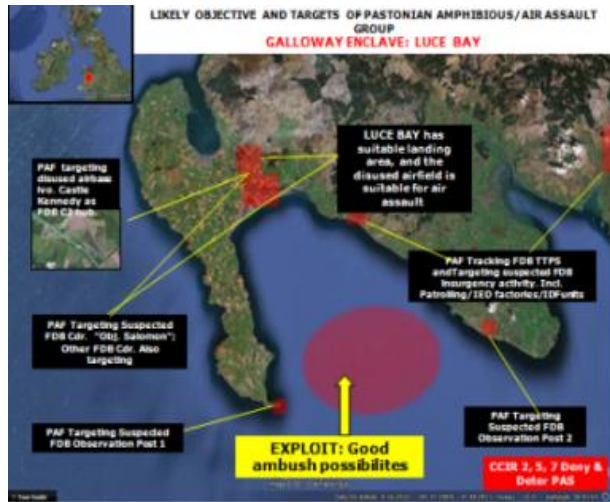
# Project KITAE III Summary



**RESULT: How best to organise for the collection and integrate HTM for targeting processes in the asymmetric environment.**



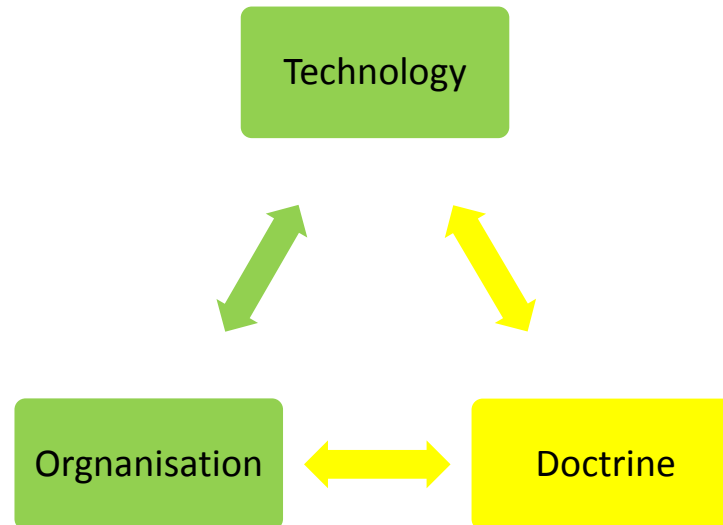
# Project CROWS NEST



**TEST TARGET NETWORK MODELLING FOR IPB MANAGEMENT AT SEA TO IMPROVE SA/SU**



# Project CROWSNEST Summary



**RESULT:** Adopting network target modelling increased SSA/SSU and increased the agility of the fleet versus the adversary.





# RESULTING RDDC BATTLESPACE AGILITY ASSESSMENT FRAMEWORK AXIOMS

The warfighting organization should be built to anticipate change and facilitate adaption.

1. Doctrine should anticipate change and facilitate adaptation.
2. Organization should anticipate change and facilitate adaption.
3. Technology should anticipate change and facilitate adaption.

**Ex. Does existing doctrine, technology, organisation facilitate task force org? Does it facilitate networking?**

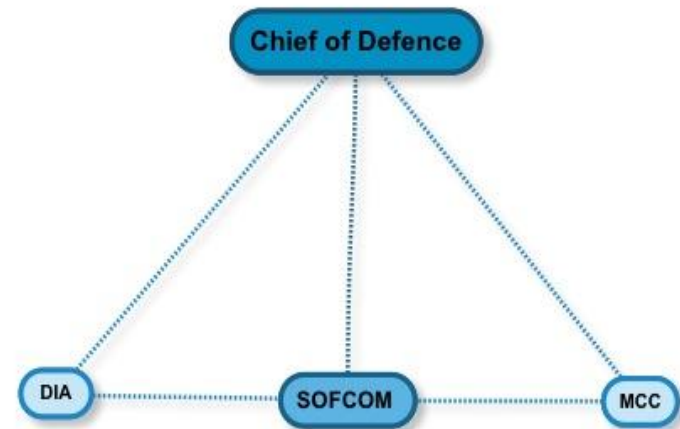
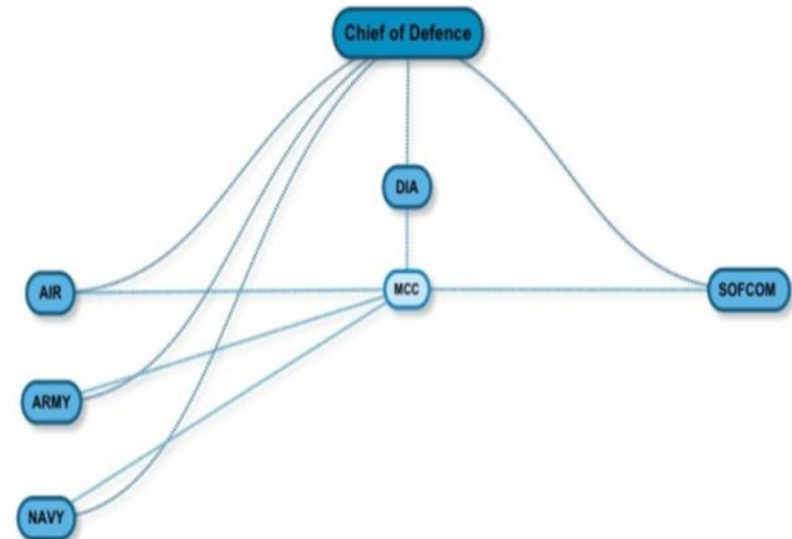
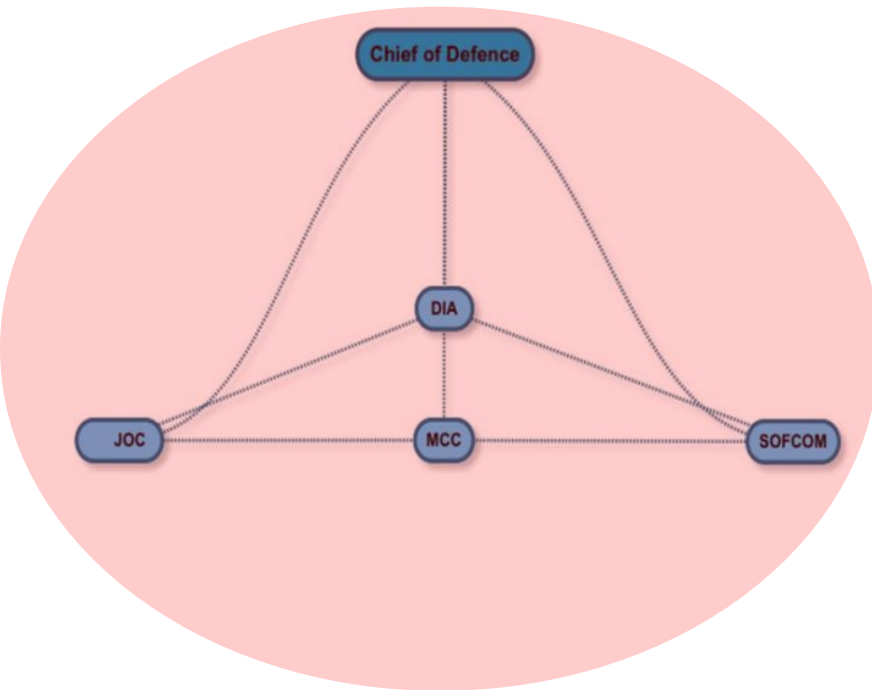


# Operationalization

- **EDUCATION**
  - Senior/Junior Staff Officer Courses (Masters/Bachelors Level)
  - Advanced Joint Intelligence Courses
  - Commanders Intelligence Courses
- **DOCTRINE**
  - AJP-2(A) Section IV – Principles of Intelligence
  - AJP -3.4.4 0323 Operational and Organization Patterns
  - AJP 1.0 0218 Evolving Character of Operations
- **PRACTICE**
  - Establishment of new SOFCOM
  - Establishment of new JOC
  - Establishment new military intelligence center (2 MI Battalions)
  - Introduction of new national intelligence C2 Architecture
  - Support for global US SOF Network
  - SOPs for N2 use of TNM
  - Adoption of AtN Approach

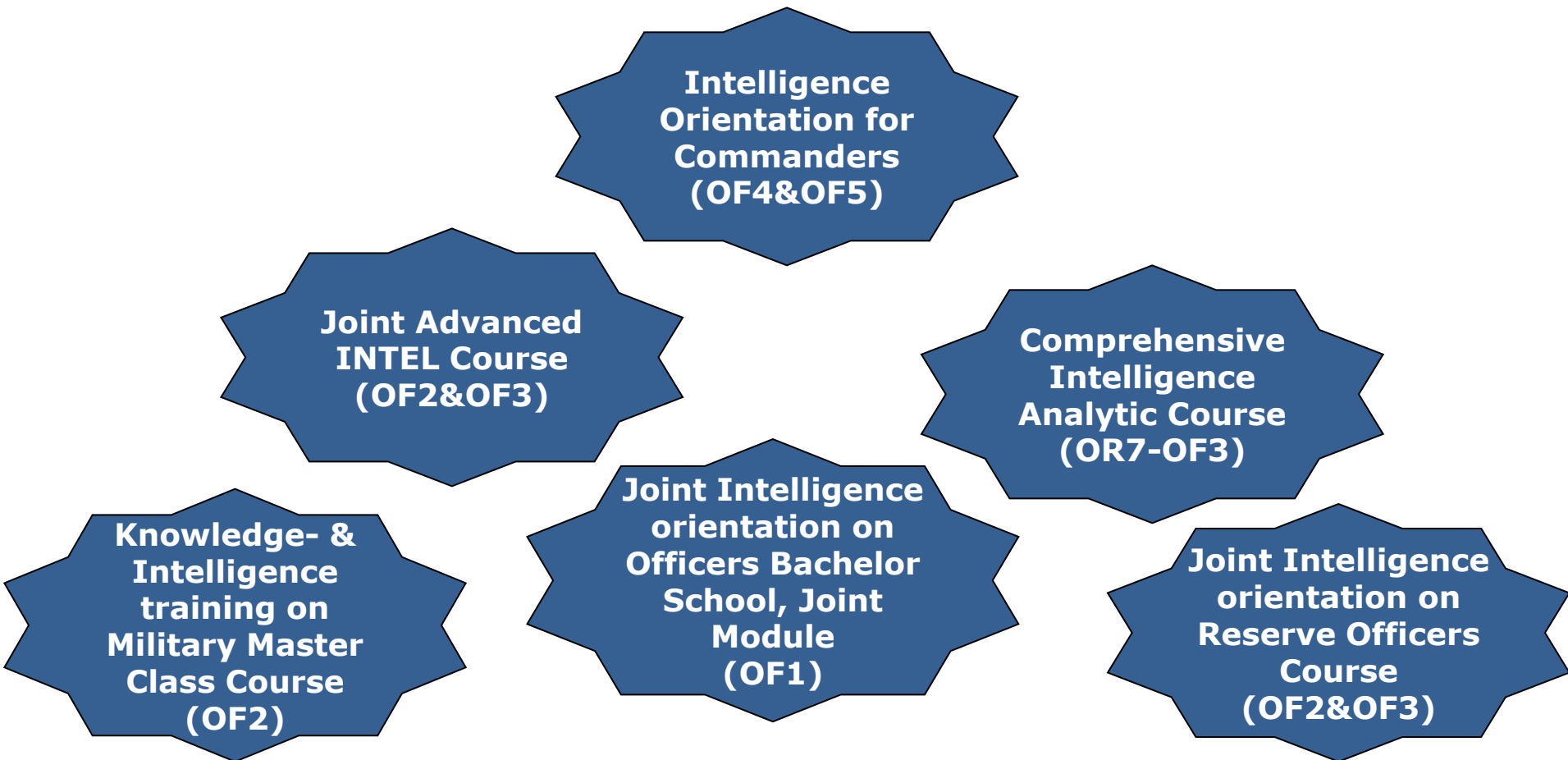


# Ex. Agility research has informed decisions on major restructuring in Danish Defence to best manage a future of complex adaptive battlespace systems





**EX- Agility research has driven a renewed focus on the quality of military intelligence in terms of organization, doctrine, and technology and the development of an intelligence.**





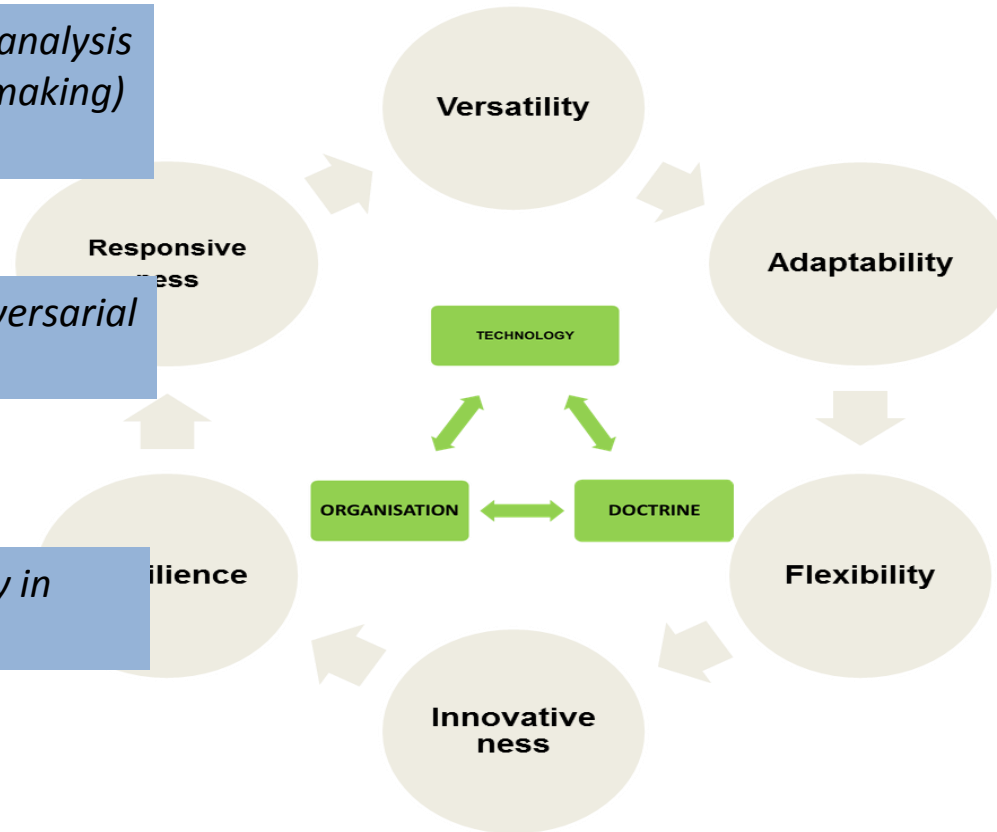
# Future Research

## NATO SAS-104 Agility Next Steps : 2014-2017

**Thread 1:** Intelligence analysis methodologies (sense-making)  
AtN

**Thread 2:** Defining Adversarial Agility

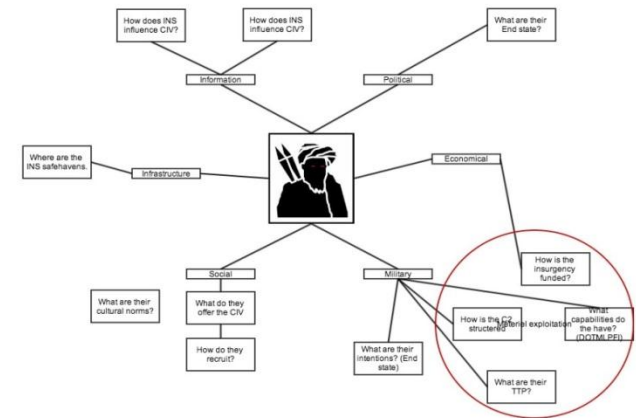
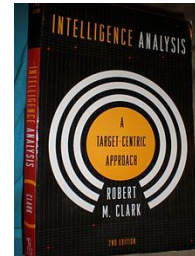
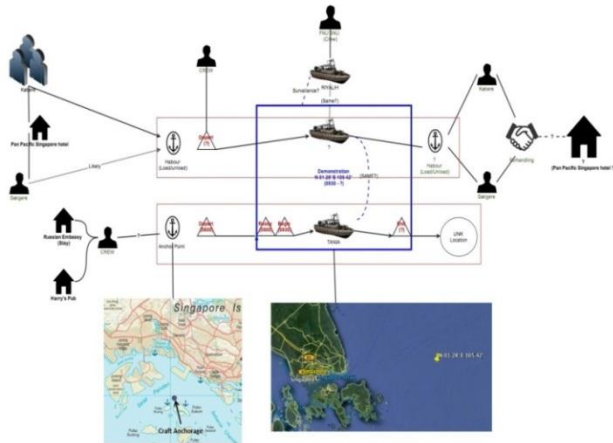
**Thread 3:** Role of Agility in Deception & Surprise



**Ex. What are the effects implementing doctrine X,Y,Z on the operational responsiveness of the military organisation/unit?**

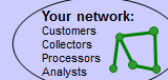


# THREAD 1: Focuses on increasing the military organisations agility through the further development of tests and SOPs regarding Target Network Modelling (TNM) and other structured analytical techniques for managing and communicating SA/SU.



## The Intelligence Target is Three Things...

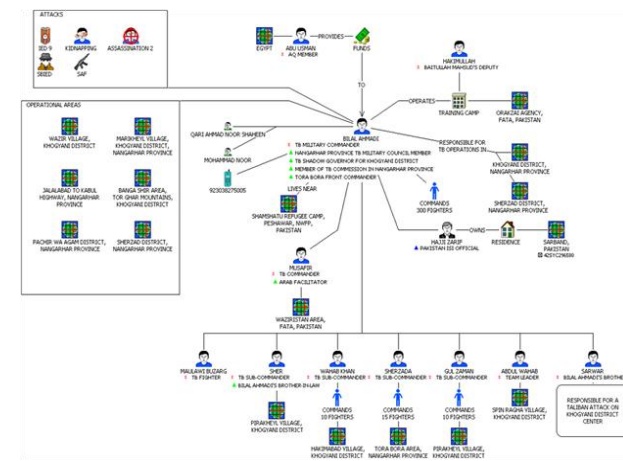
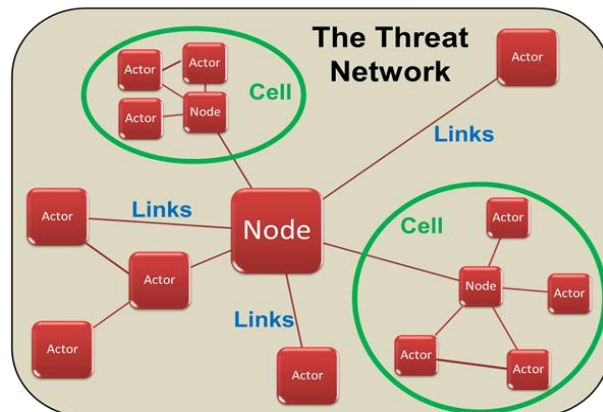
- It is Complex
- It is a System; it has
  - Structure - components and their relationships
  - Function - results produced
  - Process - sequence of activities or events
- It is a Dynamic Network



6/18/2014

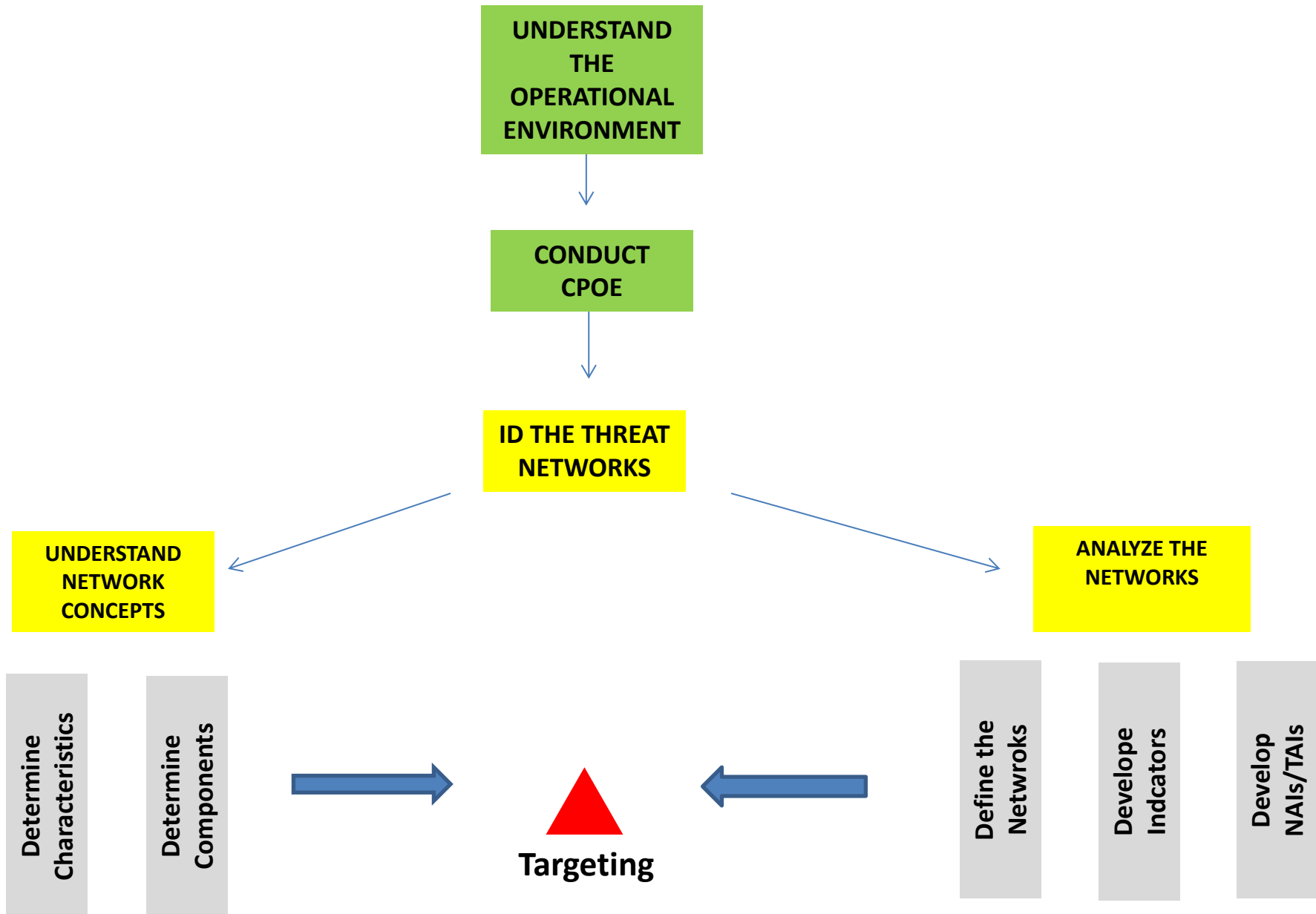
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# Thread 1: Attack the Network (AtN)







# Thread 1: Major change to operational planning approach...

## 20th Century

1. Organize
2. Intent
3. Plan
4. Execute

**VS.**

## 21st Century (AtN)

1. Understand
2. Plan
3. Organize
4. Execute

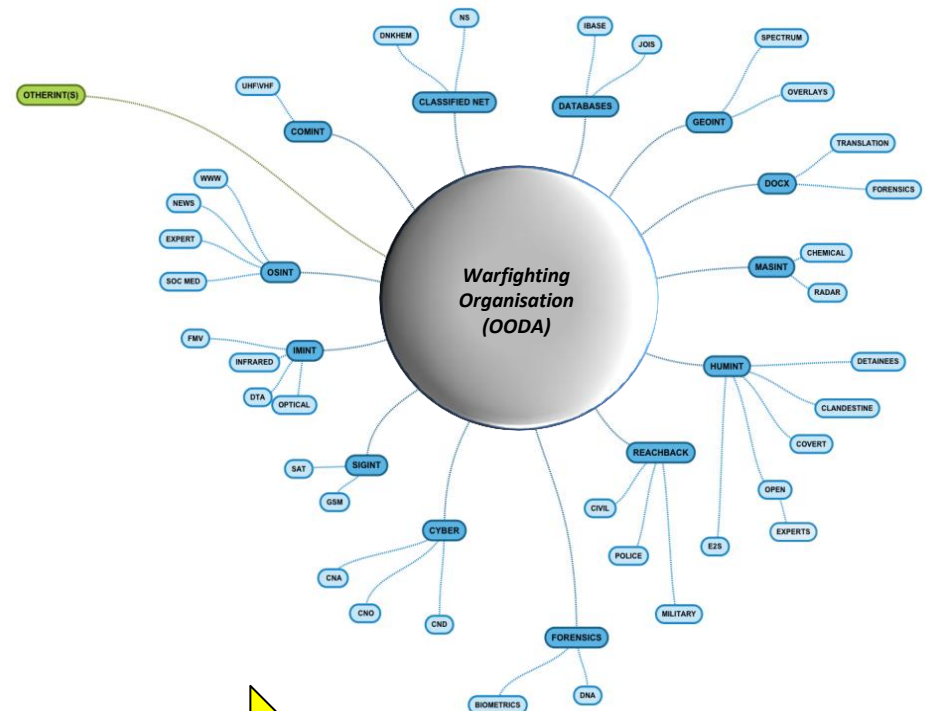
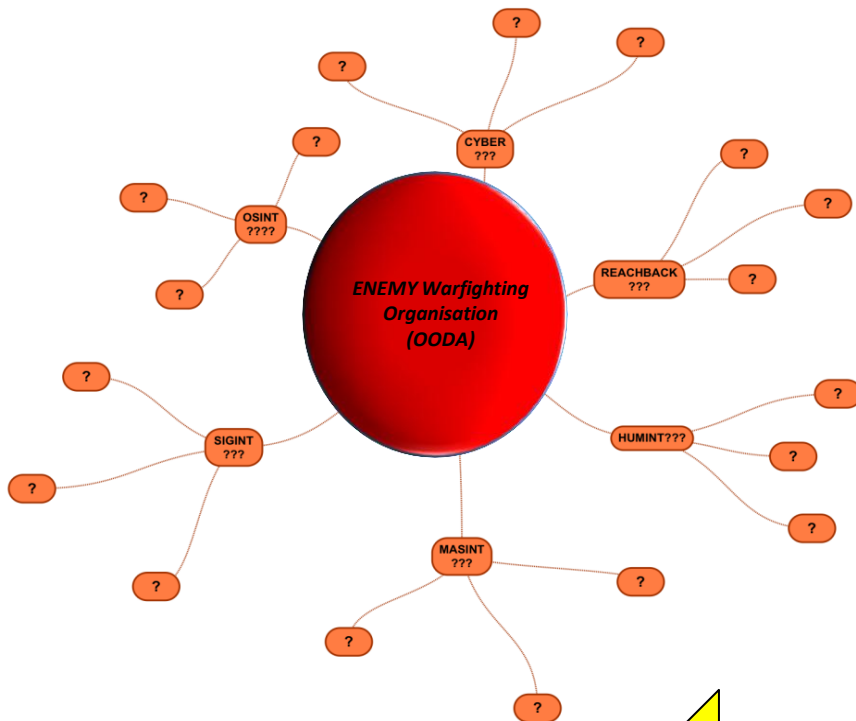
**Which approach best facilitates agility and how?**



## Thread 2: What about the adversaries agility?

PHYSICAL

COGNITIVE

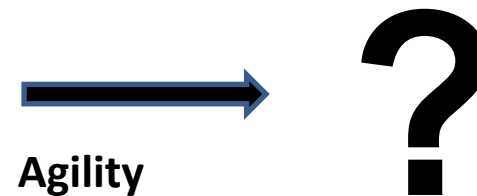
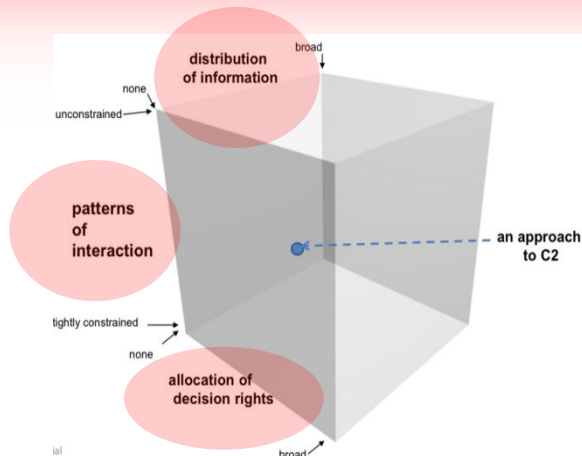
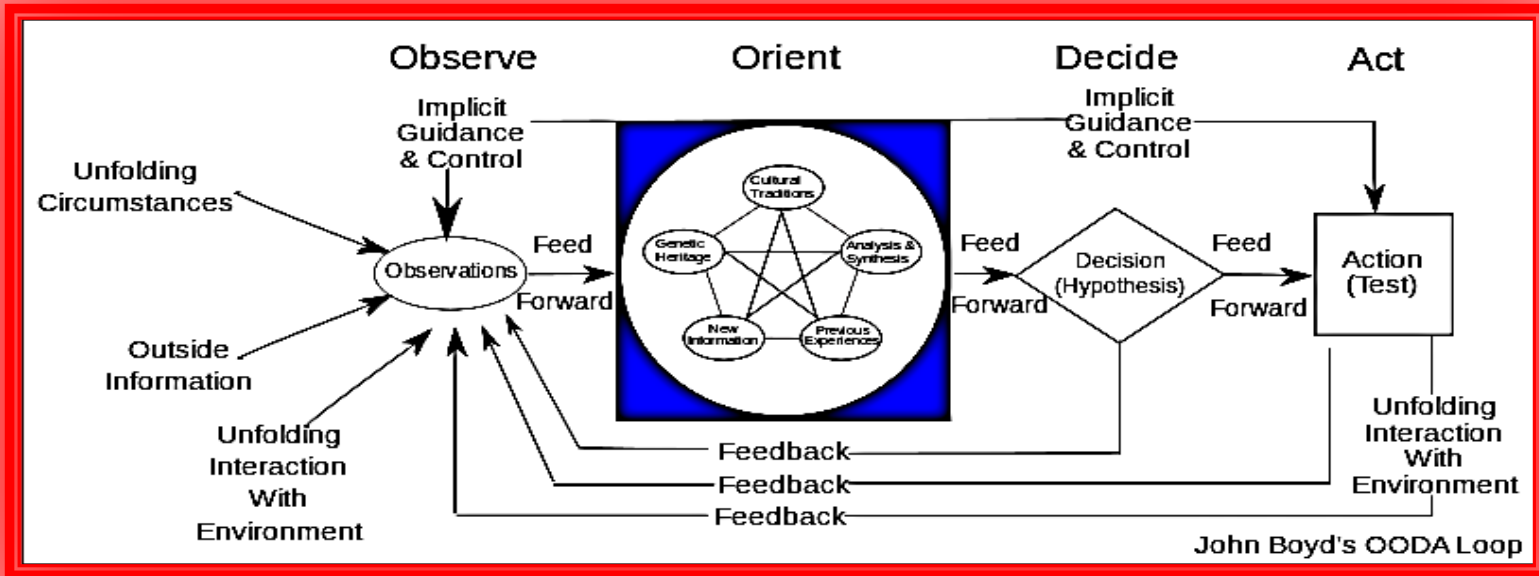


COGNITIVE

PHYSICAL



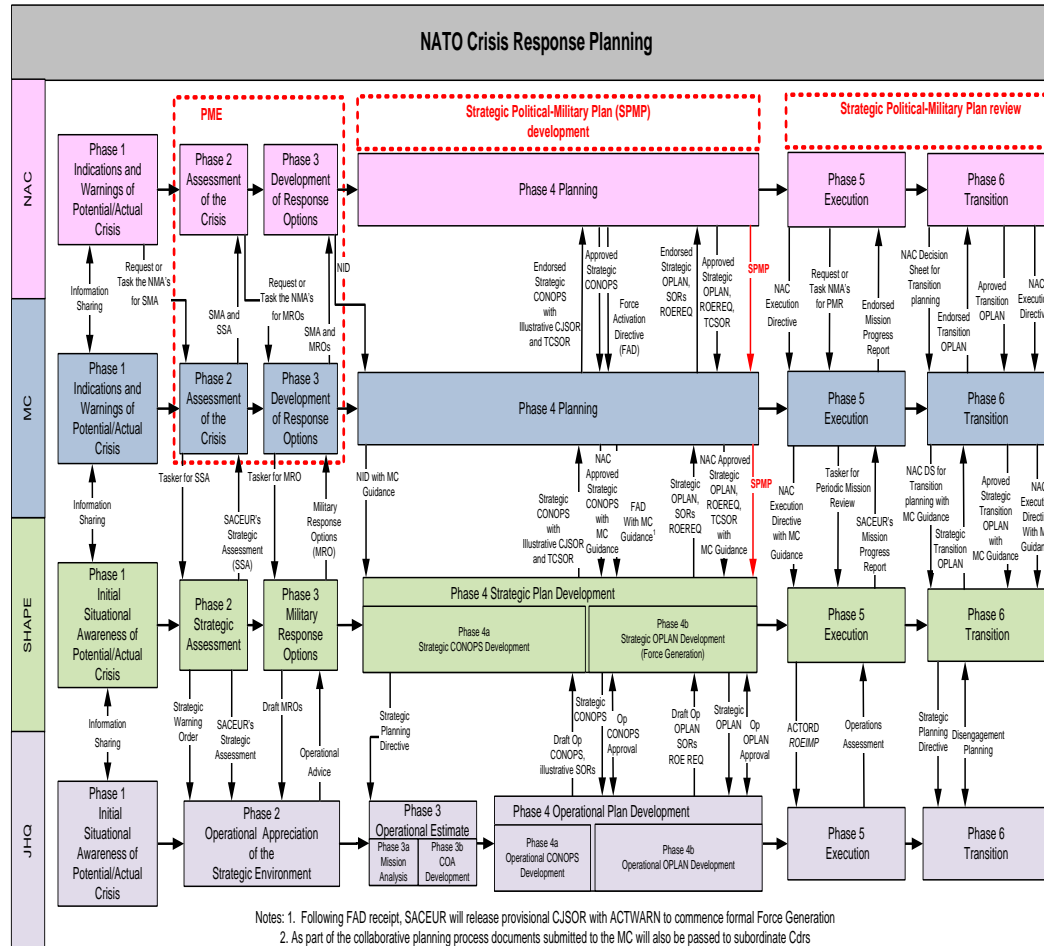
# Thread 2: The Adversary



Agility



## Thread 2: EX. Target modelling your adversaries agility where it concerns allocation of decision rights, distribution of information, patterns of interaction.



VS.





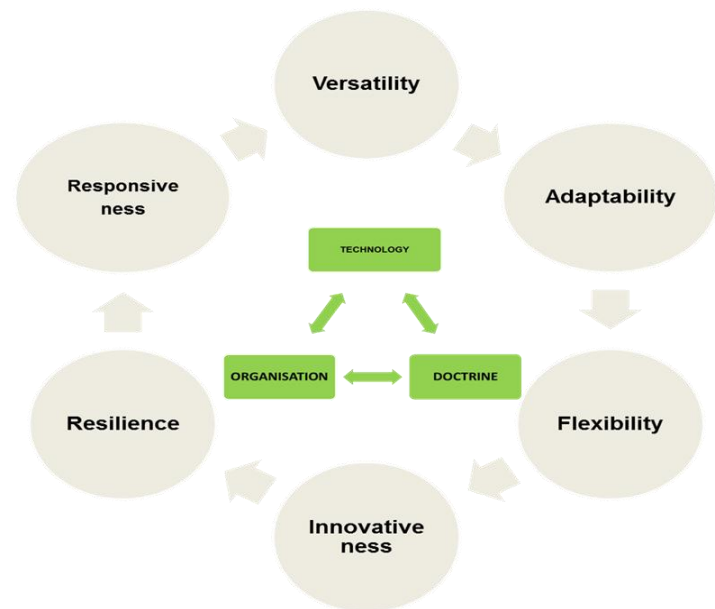
# Thread 3: Role of Agility in Deception & Surprise



## Modes of Surprise



- **Place** – Point, location, or area threatened. Axis or direction of operations.
- **Time** – Unexpectedness of timing measured in minutes, hours, days, and weeks.
- **Strength** – the amount of forces or assets committed to the operation.
- **Intention** – The scope of fundamental preferences
- **Style** – The form or fashion that the operation is carried out.





Dept. Of Joint Operations on Twitter:

**BattlespaceRD4G**

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Email: imo-11@fak.dk